



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,809	07/28/2000	Marcello Donati	753-168P	9050

2292 7590 01/02/2004

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
----------	--------------

2631

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,809

Applicant(s)

DONATI ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 7, 8, 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 5, 6, 9 and 12-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2631

DETAILED ACTION

1. This is in response to amendment filed on 10/1/03 in which claims 1-30 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection therefore this case is made final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-6, 9, 12-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 5 and 15 recite the limitation "the variation speed" in line 3, respectively. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 9 recites the limitation "the selection of some of said options" in line 2. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 9 recites the limitation "the specified option" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 12 recites the limitation "the power level" in line 28. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 14 recites the limitation "said interface means" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 2631

9. Claim 20 recites the limitation "said duration" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claims 6, 13, 15-19 and 21 are likewise rejected because they depend on a base rejected claim.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al U.S. Patent No 5,764,693 in view of Minark U.S. Patent NO 6,018,644.

As per claims 22 and 27, Taylor discloses method for generating a test signal to be applied to a radio frequency receiver having N intelligent antennas, comprising the steps of: obtaining N digital signals (see figs 1-2 elements 19, 23 and col.6, lines 59-67), each digital signal replicating a digital multi carrier signal having phase-modulated carriers; reconstructing N broadband signals by performing digital-to analog conversion (see figs. 1-2 elements 28, 29 and col.7, lines 25-67) and broadband filtering on the N digital signals (see figs. 1-2 elements 30-31); obtaining N broadband radio frequency signals by performing radio frequency conversion on the reconstructed N broadband signals (see figs 1-2 elements 33-34 and col.7, lines 27-67); amplifying the N

Art Unit: 2631

broadband radio frequency signals (see figs. 1-2 element 42 and col.7, lines 63-65); and applying the amplified N broadband to input of the receiver (see figs. 1-2).

However Taylor does not teach applying the amplified N broadband to input of the receiver, the N inputs bypassing the N intelligent antennas of the receiver.

Minarik teaches applying the amplified N broadband to input of the receiver, the N inputs bypassing the N intelligent antennas of the receiver (see figs.5-8 elements 130-134, 404, 406 and col.13, lines 5-67).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Minarik into Taylor as to minimized the power loss in the received channel as taught by Minarik (see col.10, lines 39-40).

As per claim '23 Taylor would include, wherein the obtaining step obtains the N digital signals based on parameters defining a scenario concerning at least one useful transmission signal and one or more isofrequential interferent signals, the isofrequential interferent signals having simulated arrival directions generally different from those of said relevant useful signals so that different variations of the receive and transmit channel would be provided by using different combination of power combiners and power splitters.

As per claim 24 Taylor would include, wherein the steps are repeated at time intervals of a same duration, using new parameters to obtain the N digital signals, thus giving dynamic and recurrent characteristics to said simulated scenario.

Art Unit: 2631

As per claim 25, Taylor would include, wherein the same duration is substantially equal to, or lower than, 4.61 ms as to accurately reduce noise and error at the output of the signal..

As per claim 26, Taylor would include, wherein the parameters take into account the presence of noise, a Doppler effect due to the speed of transmitting mobiles, and quick and sudden fading of a received electromagnetic field, caused by multiple paths destructive interference or by masking by obstacles encountered by mobiles in movement as to acquire the original signal at the output of the system.

As per claim 28, Taylor would include, means for obtaining said N digital signals from control messages at sequential intervals of identical duration, said control messages being used to generate a phase-modulated radio frequency test signal as to accurately identify the original digital signal.

As per claim 29 Taylor would include, means for storing tables of parameters defining a simulated scenario; and means for converting said tables of parameters to obtain said control messages as to generate a digital replicate signal similar to the original signal .

As per claim 30, Taylor would include, wherein the stored tables include, parameters simulating at least one of: presence of noise, a Doppler effect due to speed of mobiles, and fading of a received electromagnetic field as to acquire the original signal at the output of the system.

Allowable subject matter

12. Claims 1-4, 7-8, 10-11 are allowed over the prior art of record.

Art Unit: 2631

13. Claims 5-6, 9 and 13-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. Claim 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: the present invention teaches a simulation process for obtaining a phase modulated radio frequency test signal. The closest prior arts of Taylor et al U.S. Patent No 5,764,693, Minarik U.S. Patent NO 6,018,644, Dent U.S. Patent No 6,185,259, Moriyama U.S. Patent No 6,483,880 B1 and Lu U.S. Patent No 6,025,758 teach a similar simulation process. However the closest prior arts mentioned above fail to anticipate or render obvious all the recited features claims 1 and 12.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

Art Unit: 2631

1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour, can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Emmanuel Bayard

Primary Examiner

December 24, 2003